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ABSTRACT

Presented were data from the Annual Survey of Hearing Impaired Children on selected characteristics of approximately 41,000 hearing impaired students who were enrolled in special educational programs during the 1970-1971 school year. Included was information on sex, age, additional handicapping conditions, ages of onset and of discovery of the hearing loss, probable etiology, type of present educational program, parental history of deafness, and distribution according to the states in which students were attending school. Each of the variables was discussed in terms of the following student groupings: all students; students with an average hearing capacity of under 85 decibels in their better ear; students whose average hearing capacity in their better ear was over 85 decibels; and students for whom an average hearing level in the better ear could not be computed. Examined were data collection methods, the choice of variables, and the qualifications and limitations of the data. (Author)

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CHARACTERISTICS OF HEARING IMPAIRED STUDENTS BY HEARING STATUS

UNITED STATES: 1970-71

ANNUAL SURVEY
OF HEARING IMPAIRED
CHILDREN AND YOUTH

Office of Demographic Studies
Gallaudet College, Washington, D.C.

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NUMBER 10

CHARACTERISTICS OF HEARING IMPAIRED STUDENTS BY HEARING STATUS

UNITED STATES: 1970-71

DATA FROM THE ANNUAL SURVEY OF HEARING IMPAIRED CHILDREN AND YOUTH

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Washington, D.C
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ABSTRACT

Presented in this publication are selected characteristics of approximately 41,000 hearing impaired students who were enrolled in special education programs during the 1970-71 school year. Each of the variables is presented in terms of four groupings of students: (1) all students, (2) those students with a better ear average of under 85dB, (3) those with a better ear average of 85dB and above, and (4) those for whom a better ear average could not be computed. Included in the report is information on the students regarding their sex, age, additional handicapping conditions, age at onset and age of discovery of the hearing loss, probable cause of the loss, type of present educational program, parental history of deafness, and distribution according to the states in which they are attending school. The data collection methods, a description of the variables, and the qualifications and limitations of the data are also included in the report.

The Annual Survey of Hearing Impaired Children and Youth is conducted by the Office of Demographic Studies at Gallaudet College. The major source of support is grant funds from the National Institute of Education, Department of Health, Education and Welfare. The additional funding is provided by Gallaudet College.

CHARACTERISTICS OF HEARING IMPAIRED STUDENTS BY HEARING STATUS UNITED STATES: 1970-71

Brenda Rawlings

INTRODUCTION

During the 1970-71 school year the Annual Survey of Hearing Impaired Children and Youth collected information on the characteristics of over 41,000 hearing impaired students enrolled in special educational programs across the nation. This report presents a summary of these characteristics which describe this special group of children. The variables are shown in relationship to the degree of hearing loss, one of the most critical factors relating to all aspects of these children's lives.

Although this publication is similar to a previous report with information collected during the 1969-70 school year,[1] it was felt that presenting the variables by the added dimension of categories of hearing loss would provide valuable insights. The data can be viewed either simply as a summary report with the data user analyzing only the total lines shown in the various tables, or interested individuals can look at the more detailed breakdowns according to the categories of hearing loss. The results for students for whom a better ear average could not be computed are included to aid the reader in making his own qualifications of the results in terms of this missing information.

In addition to the information given on the hearing levels of these students, the following variables are included: age of the students, additional handicapping conditions, age at onset of hearing loss, age hearing loss discovered, probable cause of hearing loss, type of educational program in which the student is presently enrolled, parental history of deafness, and a distribution of the students according to the states in which they are attending school.

All of this information was collected by the Office of Demographic Studies at Gallaudet College, which conducts the Annual Survey of Hearing Impaired Children and Youth. This Survey began operations in the Spring of 1968 and is aimed at improving the educational opportunities for the hearing impaired by collecting and disseminating useful information pertinent to this group. The major source of support is grant funds provided by the National Institute of Education, Department of Health, Education and Welfare; and the remainder of funds is supplied by Gallaudet College. Appendix I provides further details regarding the Survey and the many activities of the Office.

[1] *Summary of Selected Characteristics of Hearing Impaired Students, United States: 1969-70*, Series D No. 5, Gallaudet College, Office of Demographic Studies.

DATA COLLECTION METHODS

All programs known by the Survey Office to be offering special educational services to the hearing impaired were invited to participate in the Annual Survey. Letters of invitation were sent to approximately 775 programs. Many of these programs had participated in the Survey during the previous school year. All new programs the Survey learned about were also contacted. Of this number, approximately 75 percent agreed to participate and submitted data for the 1970-71 school year. Among the reasons given by those programs that were unable to participate were that they did not have the staff time to complete the forms, they did not offer special educational services to the hearing impaired, or certain school board regulations prevented them from participating.

The basic survey forms used in gathering the data for the 1970-71 school year appear in Appendices II and III. The items included on the forms were selected on the basis of suggestions from the members of the National Advisory Committee and requests from researchers in the field of hearing impairment. Consideration was also given to the type of information that the schools might already have in their files. The Annual Survey did not want to request so much information that the schools would find it either impossible to complete the forms or that they would have an overly difficult time trying to locate the information. There are two forms, one for students under six years of age and one for students six years of age and older. The two forms were similar except for the sections on Educational History and Present Educational Program. This difference was necessitated by the fact that the type of preschool educational training varies widely from the types of services being offered to older students.

QUALIFICATIONS AND LIMITATIONS OF THE DATA

For data to be meaningful and useful, they must be interpreted and evaluated. In order to do this effectively, however, the data users must be aware of the qualifications and limitations inherent in the data. One of the Annual Survey practices is to identify those considerations it feels must be taken account of when utilizing the data.

One basic factor related to all the variables that must be recognized is that these data reflect only those programs that have participated in the Annual Survey. As most residential and day schools in the nation are participating in the Survey, students in these programs are well represented. However, there may be many students who are receiving part-time services who are not yet in the Annual Survey. Each year the Survey Office has been successful in locating more of these part-time programs and encouraging them to participate in the data collection. Attempts are presently underway to prepare improved national and state estimates of the population of hearing impaired students; and when these are completed, it should provide a better evaluation of the representativeness of the data in the Annual Survey reports.

A problem encountered with some of the items for which the survey sought information was that the schools did not have information on these items for all children. Where the information was not reported for a large number of students, it is difficult to know the true distribution of the data. Table A provides a summary of the percentage of records for which data on selected items were not reported or were not usable. Although the rate of non-reporting for several items is fairly high, these rates have dropped considerably from previous years of data collection.

Information on age was submitted for most students. When the information was missing, it was obtained by correspondence with the reporting source.

TABLE A: PERCENTAGE OF RECORDS FOR WHICH DATA FOR SELECTED ITEMS WERE NOT REPORTED OR WERE NOT USABLE: UNITED STATES, 1970-71 SCHOOL YEAR.

Item	Percent of Records for Which Data Were Not Reported or Were Not Usable
Age[1]	–
Better ear average[2]	22.0
Additional handicapping conditions	15.4
Age at onset of hearing loss	16.8
Age hearing loss discovered	40.4
Probable cause of hearing loss	24.6
Present educational program[1]	–
History of parental deafness	30.4

[1]Data for these items were edited.

[2]Only 5 percent of the records did not report some audiological results.

or it was estimated by using additional information supplied on the form.

The degree of hearing loss is reported in terms of a better ear average. This was computed by averaging the puretone threshold levels for the better ear at the frequencies of 500, 1000, and 2000 Hz. In order to compute the average, results must have been reported for all three frequencies in each ear. If in testing there was a non-response at a certain frequency and this was indicated on the form, a value of 120 ISO or 110 ASA was used for that frequency. On the other hand, if that section of the audiogram was left blank or was only partially completed, no better ear average could be computed.

Although Table A indicates that for 22 percent of the students better ear averages were not available, it is of interest to note that only five percent of the records returned to the Survey Office contained no audiological results at all. The other 17 percent reported some audiological data but lacked sufficient results for the statistical computation described above.

In an attempt to increase the reporting on this item, the Survey questionnaire now contains a section where the respondent may write in an estimate of the degree of hearing loss if the findings for the six specific frequencies used to obtain a better ear average are not available. This information should provide a better description of the students when complete audiological data are not reported.

Data on additional handicapping conditions were not reported for 15 percent of the students. This variable had the lowest rate of non-reporting of the items presented in this publication. Another consideration that must be kept in mind in reviewing the additional handicap data is that the respondents did not indicate the severity of the additional problems. Also it is not known who made the diagnosis of the handicap. It may be that some respondents only indicated there was a handicap if there was a medical diagnosis in the child's folder, and in other cases parents, teachers, or other school personnel may have made independent judgments. Further, it should be noted that reported conditions of "Emotional or Behavioral Problems" are frequently based on subjective judgments, whereas the diagnoses for other types of handicapping conditions are usually based on physiological, psychometric, and other evidence.

During the 1971-72 school year more detailed information was gathered on additional handicapping conditions. Data were sought on the severity of the handicap, indication of who made the diagnosis was requested, and a space was allowed for reporting any medication the child took for his handicap. Also, results of eye examinations, if they were maintained in the school, were requested on the students.

The age at onset of hearing loss was not available for 17 percent of the students. The age the hearing loss was discovered was not known for 40 percent of the students. It is uncertain whether information on age of discovery and onset was simply not available to the schools or whether the family and/or medical examiner in many cases could not make a judgment as to the age. On the 1971-72 record form, if this information was not known, the reporting source was asked to complete the statement, "Not sure of the exact age at onset, but the best estimate is the loss occurred before the age of _____."

The probable cause of hearing loss was not reported for one-fourth of the students. In addition to providing check boxes on the questionnaire for specific causes, boxes were provided for the respondent to record if there was "No Known Cause" for the hearing loss and "Data Not Available." The intent of the "No Known Cause" category was for those cases in which it had been established that there was no known medical cause attributed to the loss. It is possible, however, that some respondents may have checked this box to indicate that the reporting source did not have the information. In these cases the non-response rate for the item would be higher.

Information on the students' present educational program was edited. If a category had not been selected for the student, either the school was called and the information obtained, or a judgment was made in the Survey Office on the basis of additional data recorded on the questionnaire and with respect to the types of programs marked for other students within the same school.

Thirty percent of the questionnaires did not contain data on the parental history of deafness. This percentage is based only on those students for whom information was not known about both parents.

Again, it is important to consider the above statements and also the definitional material which follows in attempting to utilize these statistics for purposes of testing research hypotheses, formulating educational policies, or simply describing the hearing impaired school age population.

DISCUSSION OF THE DATA

The Survey Office receives numerous requests for data comparing "deaf" students and "hard of hearing" students. Any point between 60 to 90dB might, for specific purposes, provide the best dividing line for classifying students into one or the other category. The categories "Under 85dB" and "85dB and Above" were not chosen because the Office believes that audiologically these are superior to any alternative dB levels; rather, this point, while being reasonable from an audiometric point of view, tends to divide the total group of students into two relatively equal groups. This consideration is especially relevant when

categories containing only a small number of students are under consideration.

The data on the 41,109 hearing impaired students participating in the Annual Survey are presented in a series of tables. The more detailed tables, Tables 1-10, are included in a following section beginning on page 14. Below are highlights of the data and a number of charts and brief tables which capsulize the information. Definitional material is also included.

Hearing Threshold Levels

Table 1 provides a detailed view of the hearing threshold levels (better ear averages) of the students included in this report. As most of the following tables present variables crossed with a few broad categories of hearing threshold levels, it was felt necessary to include this more specific distribution of the reported better ear averages. The better ear averages were determined by averaging the puretone thresholds for the speech range (500, 1000, and 2000 Hz) in the better ear. These averages are reported in decibels according to the ISO[1] standard. Audiological data provided to the Survey in the ASA[2] standard were converted to the ISO standard by adding ten decibels to the ASA average. Only 11 percent of the records included audiological examinations conducted with the ASA standard.

You will note in Table 1 the category "Unable to Compute." This refers to 7,070 (17 percent) of the 41,109 students for whom better ear averages could not be determined due to the omission of results for one or more of the frequencies used to compute the average. The 1,985 students (five percent) in the category "Data Not Reported" include those students that had not been tested or for whom no audiological record was maintained in their school file. In the remaining tables, these two categories have been combined into the classification "Data Not Available."

It is interesting to note that compared with the data from the previous year of the Annual Survey, there was over a three percent improvement in the reporting for this item. For the 1969-70 school year 20 percent of the records did not provide sufficient data to compute a better ear average, and five percent had no data at all on this item; the rates for the 70-71 school year were 17 percent and five percent respectively.

Table B provides a summary of the better ear averages, but excludes the students for whom the data were not reported or were not usable. Slightly over one-half of the students had hearing losses of 85dB and above. As might be expected, those students with less severe losses, "Under 15dB" and "15 to 39dB," do not comprise a large percentage of the group. Many students with mild losses are assimilated into the regular school programs and not reported to the Annual Survey. This is one of the qualifications and limitations of the data which should be considered in reviewing all further tables.

TABLE B: NUMBER AND PERCENTAGE DISTRIBUTION BY HEARING THRESHOLD LEVELS, OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED: UNITED STATES, 1970-71 SCHOOL YEAR.

Hearing Threshold Levels in Decibels (ISO)[1]	Number of Students[2]	Percent
All Hearing Threshold Levels	32,054	100.0
Under 15 dB	541	1.7
15 – 39 dB	2,282	7.1
40 – 64 dB	4,886	15.2
65 – 84 dB	7,842	24.5
85 – 98 dB	7,709	24.1
99 dB & above	8,794	27.4

[1]Average hearing threshold in better ear computed at 500, 1000, 2000 cycles per second.
[2]Excludes those for whom audiological data were not reported or the data were not usable.

Sex

Fifty-four percent of this student population were males and 46 percent females. The general hearing population of the same age range also has a predominance of males, but the percentage is slightly higher among this hearing impaired group. As seen in Table C, the distribution of the hearing losses for each of the sexes was similar. The males were evenly divided, with 39 percent in each of the two categories. Among the females, 37 percent had losses under 85dB, and 41 percent were in the 85dB and above category. The distribution of the unknown audiological information was similar for both sexes.

Age

As previously stated, the Annual Survey collects data on hearing impaired students enrolled in special educational programs. With the increased emphasis on early childhood education, the age of hearing impaired

[1]International Organization for Standardization
[2]American Standard Association

TABLE C: NUMBER AND PERCENTAGE DISTRIBUTION OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY SEX, ACCORDING TO HEARING THRESHOLD LEVELS: UNITED STATES, 1970-71 SCHOOL YEAR.

Sex	All Hearing Threshold Levels[1]		Under 85dB (ISO)		85dB and Above (ISO)		Data Not Available	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Both Sexes	41,109	100.0	15,551	37.8	16,503	40.1	9,055	22.0
Male	22,251	100.0	8,677	39.0	8,760	39.4	4,814	21.6
Female	18,858	100.0	6,874	36.5	7,743	41.1	4,241	22.5

[1] Average hearing threshold in better ear computed at 500, 1000, 2000 cycles per second.

students receiving special educational services now extends below one year of age. During the 1970-71 school year, the Survey gathered data only from educational programs up to and through secondary educational programs. Therefore, there is only a small number of students over age twenty included in the data. In 1972 the Survey Office began a special study of those post-secondary educational units, colleges, universities, and vocational-technical institutes which are offering special services to the hearing impaired student. When these data are tabulated and analyzed, the information will appear in a separate report.

Table 2 shows the distribution by single years of age according to the degree of hearing loss. Age in this study is the age of the student as of December 31, 1970. The largest single age category was that of 6 year olds. They accounted for 5,036 students or 12 percent of the total population of students. When viewed in relationship to better ear averages, the children under six years of age had consistently high rates of unavailable data for information related to better ear averages. After age five there is an increase in the rate of reporting audiological information. This high rate of non-reporting and unusable data for the younger children is possibly attributable to the fact that complete audiological work-ups on younger children are more difficult, and thus complete or confirmed audiograms are not available for computing better ear averages.

Chart A indicates that when the students for whom better ear average data were not available are excluded from the tabulation, more than one-half of those under 10 years of age had losses of 85dB and above. At the age category of 10 to 13 years, however, the percentage of those with impairments of 85dB and above was slightly less than those with losses under 85dB (51 percent with losses of under 85dB compared to 49 percent with losses of 85dB and above). The trend reverses again for the two age groups "14 to 17 Years" and "18 Years and Over," where the greater percentage of students had losses of 85dB and above.

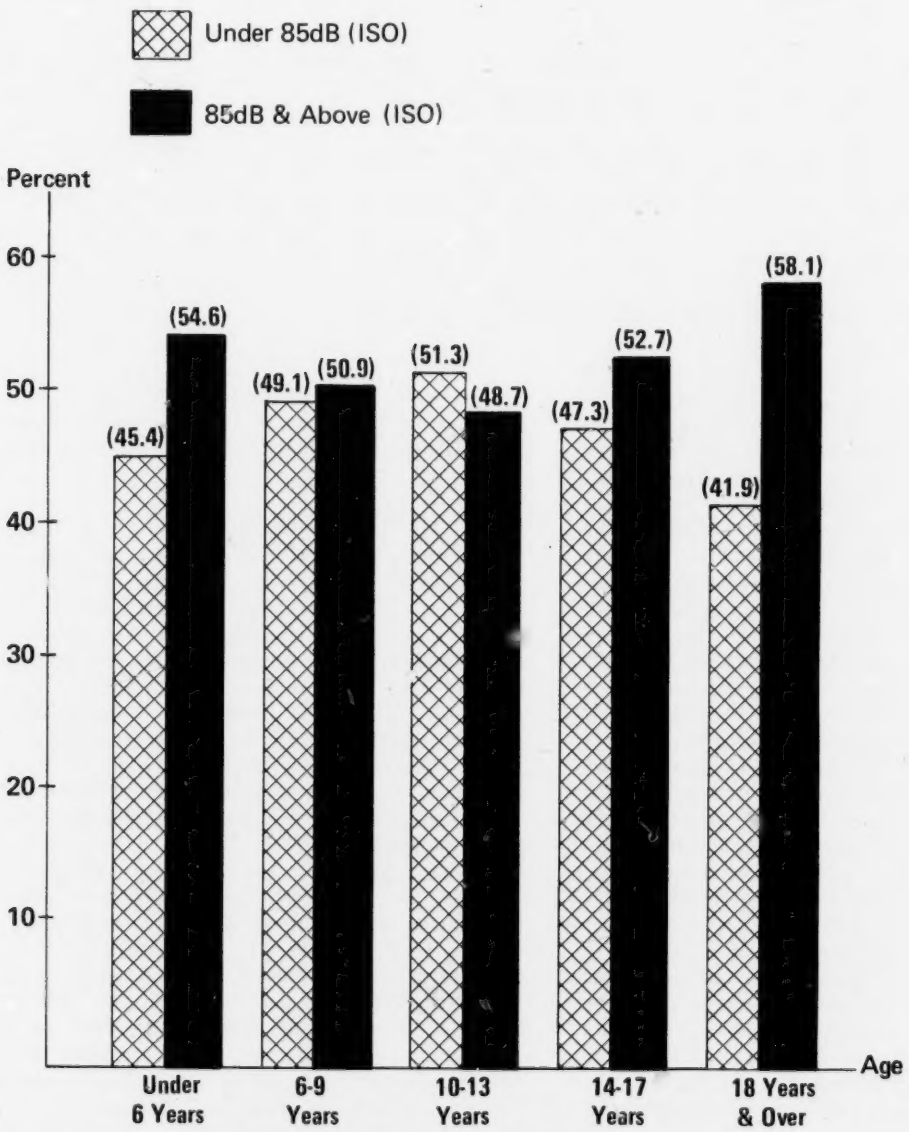
Additional Handicapping Conditions

Information relating to handicaps the students had in addition to their hearing impairment is shown in detailed Tables 3 and 4. The questionnaire section regarding additional handicapping conditions (Section VII) provided check-boxes for selected conditions and space to write in any other specific conditions. The categories of "Learning Disabilities," "Brain Damage," and "Orthopedic Disorders" were the most frequent write-in responses. The category of "Learning Disabilities" includes a variety of entries such as "learning disability," "slow learner," "aphasic," and "reading problems."

Table D provides a summary of the incidence of additional handicaps when those for whom information was not reported are excluded from the distribution. (You will recall from Table A that 15.4 percent of the records did not have information on this variable.) According to the data submitted to the Annual Survey 32 percent, or approximately one third of the students, had some additional handicaps other than their hearing impairment. Of this third, 25 percent had only one additional handicap and seven percent had two or more additional conditions.

Table E includes data relative to the number of additional handicaps children had in relationship to the degree of hearing loss. While 40 percent of all students had a hearing loss of 85dB or greater, 44 percent of those with no additional handicapping conditions had losses of 85dB and above. At the same time, a greater percentage of students with one or more additional handicaps had dB losses of under 85 compared to the percentage for all students with losses of under 85dB.

CHART A: PERCENTAGE DISTRIBUTION OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY AGE, ACCORDING TO HEARING THRESHOLD LEVELS[1]: UNITED STATES, 1970-71 SCHOOL YEAR.



[1] Average hearing threshold in better ear computed at 500, 1000, 2000 cycles per second. Excludes those for whom audiological data were not reported or the data were not usable.

It is of interest to note that when the incidence of additional handicaps is viewed in terms of hearing threshold levels, the more additional handicaps a child has the higher the rate of non-reporting for audiological data. For example, for 20 percent of the students with no additional handicaps, insufficient data were provided to compute a better ear average. This rate increased to 37 percent for students with three or more additional handicaps.

Table 3 presents a delineation of the most frequently reported specific handicaps with reference to whether the particular conditions were the only addi-

TABLE D: NUMBER AND RATE OF ADDITIONAL HANDICAPPING CONDITIONS AMONG HEARING IMPAIRED STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS: UNITED STATES, 1970-71 SCHOOL YEAR.

Number of Additional Handicapping Conditions	Number[1]	Percent
Total Number Students	34,795	100.0
No additional handicapping conditions	23,874	68.6
One additional handicapping condition	8,556	24.6
Two or more additional handicapping conditions	2,365	6.8

[1] Excludes those whom additional handicapping data were not reported or the data were not usable.

tional handicap or to the number of times the condition was reported in combination with another handicap. Also shown here are the rates of occurrence of the handicaps per 1,000 hearing impaired students. Emotional or behavioral problems were the most frequently reported additional handicaps with 3,338 cases or a rate of 95.9 per 1,000. Mental retardation was the next most frequently reported handicap with an incidence rate of 70.1 per 1,000. Perceptual motor disorders were reported at a rate of 54.2 per 1,000 students and severe visual problems for 48.8 per 1,000. (The incidence rates are based on all students for whom information was received, or 34,795 students. Not included in the computation are those 6,314 students for whom data were not reported on this item.)

Table 4 provides a breakdown of the specific additional handicaps according to the better ear averages of the students reported to have additional conditions. It should be pointed out that students with heart disorders had the highest rate of non-reporting for information on hearing threshold levels (33 percent), while only 13 percent of the students with brain damage as an additional handicap did not report enough data to compute a better ear average.

TABLE E: NUMBER AND PERCENTAGE DISTRIBUTION OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY ADDITIONAL HANDICAPPING CONDITIONS, ACCORDING TO HEARING THRESHOLD LEVELS: UNITED STATES, 1970-71 SCHOOL YEAR.

Additional Handicapping Conditions	All Hearing Threshold Levels (ISO)[1]		Under 85dB (ISO)		85dB and Above (ISO)		Data Not Available	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All Students	41,109	100.0	15,551	37.8	16,503	40.1	9,055	22.0
No additional handicaps	23,874	100.0	8,714	36.5	10,405	43.6	4,755	19.9
One additional handicap	8,556	100.0	3,647	42.6	3,170	37.1	1,739	20.3
Two additional handicaps	1,928	100.0	771	40.0	646	33.5	511	26.5
Three or more additional handicaps	437	100.0	152	34.8	123	28.1	162	37.1
Information not reported	6,314	100.0	2,267	35.9	2,159	34.2	1,888	29.9

[1] Average hearing threshold in better ear computed at 500, 1000, 2000 cycles per second.

It can be seen in Table 4 and in Table F that the difference between students with losses of under 85dB and those with losses of 85dB and above was quite sharp for certain additional handicaps. Those with brain damage or cleft lip and/or palate showed the largest difference, with a greater percentage of students having better ear averages of under 85dB. Students with other additional handicaps were relatively evenly distributed between the two hearing loss categories, with differences from one to twelve percentage points.

Age at Onset of Hearing Loss

A critical factor in describing hearing impairments and their ramifications is the age at which the loss occurred. The most obvious point is that prelingual impairments generally have a profound effect on the language development of the individual and the type of educational services he will require. Information for this variable was not reported for 16.8 percent of the students. If these students for whom the age at onset was not known are omitted from the computations, you will note that 78 percent were reported to have lost their hearing at birth (Table G). Fifteen percent incurred their hearing loss between birth and their third birthday. Only seven percent of the students in the Survey lost their hearing at three years of age or later.

Table 5 reflects the reported ages of onset in relationship to the better ear averages of the students. Chart B summarizes graphically the information in Table 5. It can be seen that there is a trend for students whose onset was at an earlier age to have more severe losses than those who lost their hearing at a later age. For example, of the students who were born with a hearing loss, 55 percent had better ear averages of 85dB and above, compared to 13 percent of the students whose age at onset was seven years or older.

Age Hearing Loss Discovered

The time lapse between the occurrence of a hearing loss and the discovery of that loss can be a great

TABLE F: PERCENTAGE DIFFERENCE BETWEEN THOSE WITH LOSSES UNDER 85dB AND THOSE WITH LOSSES OF 85dB AND ABOVE BY ADDITIONAL HANDICAPPING CONDITIONS FOR HEARING IMPAIRED STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS: UNITED STATES, 1970-71 SCHOOL YEAR.

Additional Handicapping Conditions	Percentage Under 85dB (ISO)[1]	Percentage 85dB & Above (ISO)	Difference
Brain damage	58	29	29
Cerebral palsy	45	36	9
Cleft lip &/or palate	62	17	45
Emotional or behavioral problems	38	39	-1
Epilepsy	38	35	3
Heart disorders	33	34	-1
Learning disabilities	45	40	5
Mental retardation	44	32	12
Orthopedic disorders	40	32	8
Perceptual-motor disorders	43	35	8
Severe visual	38	34	4
Other	39	38	1

[1] Average hearing threshold in the better ear computed at 500, 1000, 2000 cycles per second.

TABLE G: NUMBER AND PERCENTAGE DISTRIBUTION, BY AGE AT ONSET OF HEARING LOSS, OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED: UNITED STATES, 1970-71 SCHOOL YEAR.

Age at Onset of Hearing Loss	Number[1]	Percent
All Onsets	34,218	100.0
Onset at birth	26,703	78.0
Under 3 years	5,166	15.1
3-6 years	1,805	5.3
7 years & over	544	1.6

[1]Excludes those for whom onset data were not reported or the data were not usable.

importance in terms of seeking medical treatment, amplification, appropriate educational training, and family counselling. In recent years there has been an increase in efforts towards early detection of hearing impairments both by the medical profession and by states in their audiometric screening programs.

The Survey sought information from the schools on the age at which the hearing losses were discovered. Data on this item, however, were not available for over 16,600 students or 40 percent of the population. Although this percentage of unknown information is extremely high, during the previous year of data collection the rate of non-reporting for this item was 53 percent. This marked decrease may indicate that more programs are beginning to collect this type of information.

In text Table H, for those where discovery information was available, only one percent of the losses was discovered at birth, and an additional 18 percent of the losses were discovered prior to the first birthday.

The detailed data collected on age of discovery of hearing loss are presented in Table 6. The greater percentage of students whose loss was discovered at earlier years had better ear averages of 85dB and above. Approximately 53 percent of the students whose hearing loss was discovered under one year of age had better ear averages of 85dB and above, compared to five percent of the students whose loss was discovered at nine years and over. This tendency is probably due to the relationship between onset and discovery and the fact that the earlier onsets reflected more severe hearing losses.

It is of interest to note that although the percentage of students with losses of under 85dB increases as the age of discovery increases, there appears to be a greater increase between two years of age and three years of age (thirty-five percent of those whose losses were discovered at two years of age compared to 51 percent of those with discovery at three years of age).

A previous report and one that is planned provide additional information relating the age of discovery and the age of onset of hearing loss. The efforts being undertaken by states to identify children's hearing problems through audiometric screening programs also are delineated in the report, *National Survey of State Identification Audiometry Programs and Special Educational Services for Hearing Impaired Children and Youth, United States: 1972.*[1]

Probable Cause of Hearing Loss

The Survey Office receives many requests for statistics relative to the causal factors in hearing impairments. Information on the cause of hearing loss was reported for approximately 75 percent of the students. It is interesting to note, though, that another

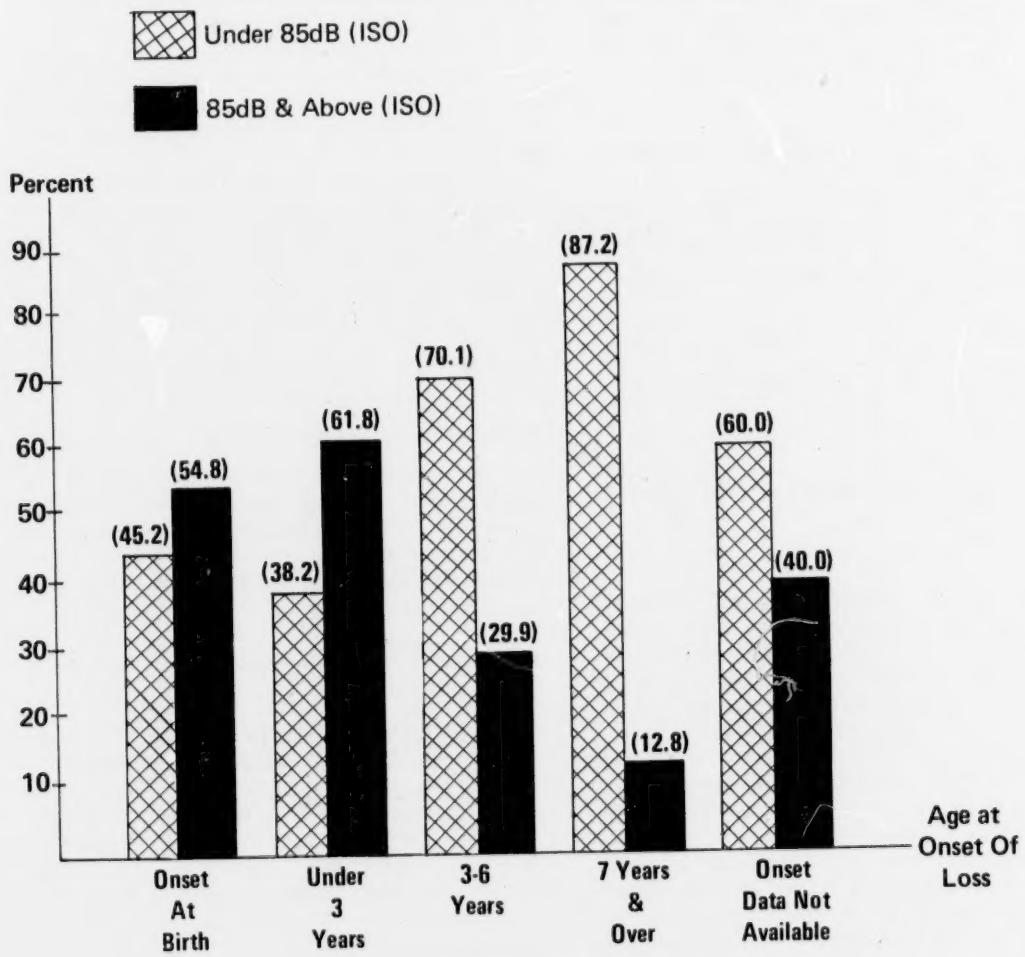
[1]Gallaudet College, Office of Demographic Studies, Series C, No. 1.

TABLE H: NUMBER AND PERCENTAGE DISTRIBUTION, BY AGE OF DISCOVERY OF HEARING LOSS, OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED: UNITED STATES, 1970-71 SCHOOL YEAR.

Age Hearing Loss Discovered	Number[1]	Percent
All Ages	24,488	100.0
At birth	347	1.4
Under 1 year	4,448	18.2
1-2 years	11,117	45.4
3-5 years	5,684	23.2
6 years & above	2,892	11.8

[1]Excludes those for whom discovery data were not reported or the data were not usable.

CHART B: PERCENTAGE DISTRIBUTION OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY AGE AT ONSET, ACCORDING TO HEARING THRESHOLD LEVELS[1]: UNITED STATES, 1970-71 SCHOOL YEAR.



[1] Average hearing threshold in better ear computed at 500, 1000, 2000 cycles per second. Excludes those for whom audiological data were not reported or the data were not usable.

24 percent indicated that there was "No Known Cause." As previously mentioned in the section on qualifications and limitations, this latter category was meant for those cases where there was no known medical cause for the impairment. The large percentage indicating this, however, may suggest that there was confusion between the categories of "No Known Cause" and "Data Not Available."

As seen in Table 7, maternal rubella was the most frequently reported cause of hearing loss, with 6,077 cases. Hereditary hearing impairments were reported for 3,073 individuals. Another 2,207 hearing losses were attributed to prematurity. Meningitis (2,017) and measles (1,114) were the leading causes of hearing loss for students who lost their hearing after birth.

When looking at specific causes in conjunction with the degree of hearing loss, it is interesting to note that of the causes for onset at birth, students with losses due to heredity and trauma to mother had the largest percentage, with hearing losses of 85dB and above. Forty-nine percent of the students with losses caused by hereditary factors had losses of 85dB and above while 46 percent of those whose loss was attributed to trauma to mother had losses of 85dB or

greater. For most of the known causes with onset after birth the larger proportion of students had losses of under 85dB. The only exception to this was in cases of meningitis where 50 percent of the students had losses of 85dB and above and 15 percent of the students whose loss was due to otitis media had hearing losses of 85dB and above. This latter percentage was the smallest for any of the reported causes.

Multiple checking for this item was requested if the probable cause was believed due to a number of factors. Table I provides a breakdown of the number of students whose losses were attributed to a single cause as compared to those where multiple items were indicated. A single cause was reported for 47 percent of the students, and only five percent of the losses were due to multiple factors.

Type of Present Educational Program

Identification of the types of special educational services hearing impaired students are presently receiving is a major objective of the Survey. Variation in program offerings and quality obviously exist, but by broadly classifying the educational programs one gets a sense of where these students are being educated and a description of the student population in various programs.

The items in Table 8 show the categories of the most frequently reported special educational services for the students in the Survey. The programs themselves were asked to describe the educational services under section II of the reporting form. This question was asked for each student rather than obtaining the information on the institution itself. Within a single institution, children may be receiving a variety of special educational services, and it was important to make this distinction. For example, a student might be attending a residential school but be in a program within that school which would be better defined as a program for the multiply handicapped.

Residential schools for the deaf (18,689 students) and classes for the hearing impaired (12,651 students) were the two most frequently reported types of educational programs. Table J reveals that 45 percent of the students were in residential schools, 31 percent in classes for the hearing impaired and 24 percent distributed among the remaining categories.

TABLE I: NUMBER AND PERCENTAGE DISTRIBUTION, BY CAUSE OF HEARING LOSS, OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED: UNITED STATES, 1970-71 SCHOOL YEAR.

Number of Causes Attributed to Hearing Loss	Number	Percent
Total Students	41,109	100.0
Single cause attributed to hearing loss	19,271	46.9
Multiple cause attributed to hearing loss	1,922	4.7
No known cause	9,784	23.8
Data not reported	10,132	24.6

TABLE J: NUMBER AND PERCENTAGE DISTRIBUTION, BY TYPE OF EDUCATIONAL PROGRAM, OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED: UNITED STATES, 1970-71 SCHOOL YEAR.

Type of Program	Number	Percent
All Programs	41,109	100.0
Residential school for deaf	18,689	45.5
Day school for deaf	2,960	7.2
Classes for hearing impaired	12,651	30.8
Program for multiply handicapped	630	1.5
Itinerant program	2,685	6.5
Part-time special educational services	1,698	4.1
Speech & hearing clinic	613	1.5
Other programs	1,183	2.9

When the student composition of the various programs is viewed in terms of the degree of hearing loss (Chart C), it is seen that the residential schools have a larger percentage of students with better ear averages of 85dB and above (69.2 percent). As would be expected, itinerant programs and part-time special educational programs had a larger number of students with dB losses of under 85 (90.5 percent and 73.0 percent).

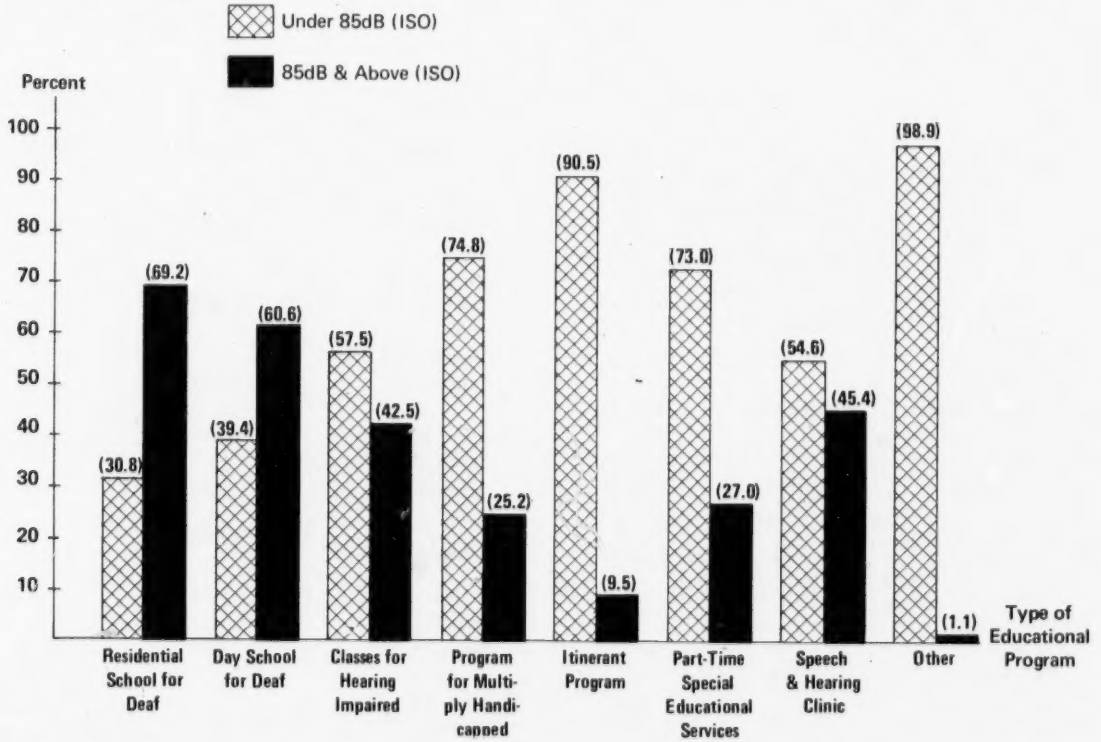
Regarding the distribution of the unknown audiological information for the various programs, the larger percentage of unknown audiological information occurred for students in programs at speech and hearing clinics. Forty percent of the students in these programs did not have sufficient data to compute a better ear average. Similarly, 36 percent of the students in programs for the multiply handicapped did not have audiological data available to compute an average. Speech and hearing clinics generally are servicing younger children, and the lack of better ear averages may be due to the fact that these younger children have a higher percentage of incomplete audiological data reported to the Survey Office.

Parental History of Hearing Loss

Included on the questionnaire section "History of Hearing Loss" was a question whether the student's mother or father had normal hearing or a hearing impairment prior to age six. Information on this variable was not available for approximately 30 percent of the students. If those students and those for whom a better ear average could not be computed are excluded from the tabulation, as in Table K, almost 90 percent of the students had parents who did not have a hearing impairment prior to six years of age.

Table 9 provides a more detailed distribution of this variable by degree of hearing loss. The data

CHART C: PERCENTAGE DISTRIBUTION OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY TYPE OF EDUCATIONAL PROGRAM, ACCORDING TO HEARING THRESHOLD LEVELS[1]: UNITED STATES, 1970-71 SCHOOL YEAR.



[1] Average hearing threshold in better ear computed at 500, 1000, 2000 cycles per second. Excludes those for whom audiological data were not reported or the data were not usable.

indicate that there was only a slight difference in the degree of hearing loss of the students when examined by whether their parents had a hearing loss. For example, 37 percent of the students whose parents had normal hearing before age six had dB losses of under 85 as compared to 33 percent of the students who had at least one parent with a hearing loss. When it was reported that both the mother and the father of the student had suffered a hearing loss prior to age six, 56 percent of these students had hearing losses of 85dB and above. In the cases where it was reported that one parent had a loss and the other parent had normal hearing, 60 percent of these students had losses of 85dB and above.

It should be noted that the data in Table K and Table 9 refer to the number of students and not the number of parents. Of the 2,205 students who had parents with a hearing impairment, 1,044 reported that both parents had a loss. Therefore the total number of parents with a known hearing impairment before their sixth birthday was 3,249.

States

It was mentioned in the introduction of the report that all special educational programs for the hearing impaired that were known by the Survey Office were invited to participate in the Annual Survey. However, some programs were unable to join the Survey and it is likely that some existing programs were unknown and did not receive letters of invitation. It must be emphasized that these data represent only the enrollment in those programs participating in the Annual Survey and do not reflect actual numbers of hearing impaired students for any particular state or the number of hearing impaired receiving special educational services. Although every state is represented in these data, audiological data for some states in Table 10 have been omitted because there were two or less programs participating and the confidentiality of the data prohibits the publication of information that would describe particular schools.

The previously mentioned report, *National Survey of State Identification Audiometry Programs and Special Educational Services for Hearing Impaired Children and Youth*,[1] provides group statistics regarding the states and the special educational services offered by private and public facilities.

[1]Gallaudet College, Office of Demographic Studies, Series C, No. 1.

TABLE K: NUMBER AND PERCENTAGE DISTRIBUTION, BY HISTORY OF PARENTAL DEAFNESS BEFORE AGE SIX, OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED, ACCORDING TO HEARING THRESHOLD LEVELS[1]: UNITED STATES, 1970-71 SCHOOL YEAR.

History of Parental Deafness Before Age Six	Total[2]		Under 85dB (ISO)		85dB and Above (ISO)	
	Number	Percent	Number	Percent	Number	Percent
Total Students	22,682	100.0	10,540	100.0	12,142	100.0
Both parents normal	20,198	89.0	9,432	89.5	10,766	88.7
Both parents with loss	794	3.5	215	2.0	579	4.8
One parent with loss	979	4.3	505	4.8	474	3.9
One parent normal; information on other parent not reported	711	3.1	388	3.7	323	2.7

[1]Average hearing threshold in better ear computed at 500, 1000, 2000 cycles per second.

[2]Excludes those for whom audiological data and parental history data were not reported or the data were not usable.

TABLE 1: NUMBER AND PERCENTAGE DISTRIBUTION OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY HEARING THRESHOLD LEVELS: UNITED STATES, 1970-71 SCHOOL YEAR.

Better Ear Averages in Decibels (ISO)[1]	Number of Students	Percent
All Hearing Threshold Levels (ISO)	41,109	100.0
Under 15dB	541	1.3
15-19dB	274	.7
20-24dB	311	.8
25-29dB	546	1.3
30-34dB	527	1.3
35-39dB	624	1.5
40-44dB	638	1.6
45-49dB	825	2.0
50-54dB	925	2.3
55-59dB	1,115	2.7
60-64dB	1,383	3.4
65-69dB	1,655	4.0
70-74dB	1,886	4.6
75-79dB	2,107	5.1
80-84dB	2,194	5.3
85-89dB	2,348	5.7
90-94dB	2,626	6.4
95-98dB	2,735	6.7
99dB & Above	8,794	21.4
Unable to Compute[2]	7,070	17.2
Data Not Reported	1,985	4.8

[1]Average hearing threshold in better ear computed at 500, 1000, 2000 cycles per second.

[2]The average could not be determined due to the omission of one or more of the frequencies used to compute the better ear average.

TABLE 2: NUMBER AND PERCENTAGE DISTRIBUTION OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY AGE, ACCORDING TO HEARING THRESHOLD LEVELS: UNITED STATES, 1970-71 SCHOOL YEAR.

Age	All Hearing Threshold Levels (ISO)[1]		Under 85dB (ISO)		85dB and Above (ISO)		Data Not Available	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All Ages	41,109	100.0	15,551	37.8	16,503	40.1	9,055	22.0
Under 3 Years	447	100.0	86	19.2	105	23.5	256	57.3
3 Years	754	100.0	174	23.1	226	30.0	354	46.9
4 Years	1,326	100.0	379	28.6	426	32.1	521	39.3
5 Years	2,860	100.0	836	29.2	1,014	35.5	1,010	35.3
6 Years	5,036	100.0	1,512	30.0	2,074	41.2	1,450	28.8
7 Years	2,320	100.0	951	41.0	821	35.4	548	23.6
8 Years	2,358	100.0	1,015	43.0	864	36.6	479	20.3
9 Years	2,405	100.0	1,044	43.4	928	38.6	433	18.0
10 Years	2,766	100.0	1,195	43.2	1,123	40.6	448	16.2
11 Years	3,271	100.0	1,427	43.6	1,328	40.6	516	15.8
12 Years	3,648	100.0	1,547	42.4	1,437	39.4	664	18.2
13 Years	2,590	100.0	1,048	40.5	1,069	41.3	473	18.2
14 Years	2,431	100.0	976	40.1	995	41.0	460	18.9
15 Years	2,310	100.0	914	39.6	991	43.0	405	17.5
16 Years	2,018	100.0	774	38.4	902	44.7	342	16.9
17 Years	1,902	100.0	734	38.6	897	47.2	271	14.2
18 Years	1,571	100.0	587	37.4	750	47.7	234	14.9
19 Years	757	100.0	244	32.2	399	52.7	114	15.1
20 Years & Over	339	100.0	108	31.9	154	45.4	77	22.7

[1]Average hearing threshold in better ear computed at 500, 1000, 2000 cycles per second.

TABLE 3: NUMBER AND RATE PER 1,000 STUDENTS OF ADDITIONAL HANDICAPPING CONDITIONS AMONG STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED: UNITED STATES, 1970-71 SCHOOL YEAR.

Additional Handicapping Conditions	Total Number of Reported Conditions[1]	Number of Conditions Per 1,000 Students[2]	Number of Times Condition Reported as the Only Additional Handicap	Number of Times Condition Reported in Combination With Other Handicapping Conditions
Total	13,662	392.6	8,692	4,970
Brain Damage	168	4.8	144	24
Cerebral Palsy	1,123	32.3	724	399
Cleft Lip &/or Palate	214	6.2	151	63
Emotional or Behavioral Problems	3,338	95.9	2,212	1,126
Epilepsy	226	6.5	134	92
Heart Disorders	750	21.6	400	350
Learning Disabilities	910	26.2	830	80
Mental Retardation	2,440	70.1	1,387	1,053
Orthopedic Disorders	250	7.2	177	73
Perceptual-Motor Disorders	1,885	54.2	968	917
Severe Visual	1,699	48.8	906	793
Other	659	18.9	659	–

[1]For some students more than one additional handicap was reported.
[2]Based on 34,795 students. Excluded are the 6,314 students for whom this information was not reported.

TABLE 4: NUMBER AND PERCENTAGE DISTRIBUTION OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY ADDITIONAL HANDICAPPING CONDITIONS, ACCORDING TO HEARING THRESHOLD LEVELS: UNITED STATES, 1970-71 SCHOOL YEAR.

Additional Handicapping Conditions	All Hearing Threshold Levels (ISO)[1]		Under 85dB (ISO)		85dB and Above (ISO)		Data Not Available	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Brain Damage	168	100.0	98	58.3	48	28.6	22	13.1
Cerebral Palsy	1,123	100.0	500	44.5	400	35.6	223	19.9
Cleft Lip &/or Palate	214	100.0	133	62.1	37	17.3	44	20.6
Emotional or Behavioral Problems	3,338	100.0	1,278	38.3	1,291	38.7	769	23.0
Epilepsy	226	100.0	86	38.1	80	35.4	60	26.5
Heart Disorders	750	100.0	249	33.2	254	33.9	247	32.9
Learning Disabilities	910	100.0	405	44.5	365	40.1	140	15.4
Mental Retardation	2,440	100.0	1,063	43.6	770	31.6	607	24.9
Orthopedic Disorders	250	100.0	99	39.6	80	32.0	71	28.4
Perceptual-Motor Disorders	1,885	100.0	816	43.3	657	34.9	412	21.9
Severe Visual	1,699	100.0	641	37.7	577	34.0	481	28.3
Other	659	100.0	259	39.3	249	37.8	151	22.9

[1] Average hearing threshold in the better ear computed at 500, 1000, 2000 cycles per second.

TABLE 5: NUMBER AND PERCENTAGE DISTRIBUTION OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY AGE AT ONSET OF HEARING LOSS, ACCORDING TO HEARING THRESHOLD LEVELS: UNITED STATES, 1970-71 SCHOOL YEAR.

Age at Onset of Hearing Loss	All Hearing Threshold Levels (ISO)[1]		Under 85dB (ISO)		85dB and Above (ISO)		Data Not Available	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All Onsets	41,109	100.0	15,551	37.8	16,503	40.1	9,055	22.0
At Birth	26,703	100.0	9,421	35.3	11,423	42.8	5,859	21.9
Under 1 Year	1,968	100.0	513	26.1	968	49.2	487	24.7
1 Year	1,942	100.0	525	27.0	993	51.1	424	21.8
2 Years	1,256	100.0	488	38.9	509	40.5	259	20.6
3 Years	721	100.0	364	50.5	243	33.7	114	15.8
4 Years	400	100.0	217	54.3	118	29.5	65	16.3
5 Years	367	100.0	250	68.1	63	17.2	54	14.7
6 Years	317	100.0	241	76.0	34	10.7	42	13.2
7 Years	178	100.0	128	71.9	24	13.5	26	14.6
8 Years	134	100.0	101	75.4	11	8.2	22	16.4
9 Years & Over	232	100.0	160	69.0	22	9.5	50	21.6
Data Not Reported	6,891	100.0	3,143	45.6	2,095	30.4	1,653	24.0

[1] Average hearing threshold in the better ear computed at 500, 1000, 2000 cycles per second.

TABLE 6: NUMBER AND PERCENTAGE DISTRIBUTION OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY AGE HEARING LOSS DISCOVERED, ACCORDING TO HEARING THRESHOLD LEVELS: UNITED STATES, 1970-71 SCHOOL YEAR.

Age Hearing Loss Discovered	All Hearing Threshold Levels (ISO)[1]		Under 85dB (ISO)		85dB and Above (ISO)		Data Not Available	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All Ages	41,109	100.0	15,551	37.8	16,503	40.1	9,055	22.0
At Birth	347	100.0	101	29.1	167	48.1	79	22.8
Under 1 Year	4,448	100.0	896	20.1	2,346	52.7	1,206	27.1
1 Year	6,022	100.0	1,457	24.2	3,028	50.3	1,537	25.5
2 Years	5,095	100.0	1,872	36.7	2,176	42.7	1,047	20.5
3 Years	2,754	100.0	1,413	51.3	885	32.1	456	16.6
4 Years	1,430	100.0	889	62.2	323	22.6	218	15.2
5 Years	1,500	100.0	1,168	77.9	171	11.4	161	10.7
6 Years	1,276	100.0	1,063	83.3	82	6.4	131	10.3
7 Years	610	100.0	506	83.0	38	6.2	66	10.8
8 Years	360	100.0	294	81.7	19	5.3	47	13.0
9 Years & Over	646	100.0	522	80.8	33	5.1	91	14.1
Data Not Reported	16,621	100.0	5,370	32.3	7,235	43.5	4,016	24.2

[1]Average hearing threshold in better ear computed at 500, 1000, 2000 cycles per second.

TABLE 7: NUMBER AND PERCENTAGE DISTRIBUTION OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY PROBABLE CAUSE OF HEARING LOSS, ACCORDING TO HEARING THRESHOLD LEVELS: UNITED STATES, 1970-71 SCHOOL YEAR.

Probable Cause of Hearing Loss	All Hearing Threshold Levels (ISO)[1]		Under 85dB (ISO)		85dB and Above (ISO)		Data Not Available	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Causes of Hearing Loss With Onset at Birth								
Maternal Rubella	6,077	100.0	1,946	32.0	2,500	41.1	1,631	26.8
Trauma at Birth	916	100.0	406	44.3	349	38.1	161	17.6
Trauma to Mother	253	100.0	86	34.0	117	46.2	50	19.8
Medication During Pregnancy	271	100.0	104	38.4	107	39.5	60	22.1
Prematurity	2,207	100.0	1,036	46.9	814	36.9	357	16.2
Rh Incompatibility	1,402	100.0	625	44.6	550	39.2	227	16.2
Complications of Pregnancy	994	100.0	437	44.0	346	34.8	211	21.2
Hereditary	3,073	100.0	928	30.2	1,501	48.8	644	21.0
Other Causes	844	100.0	347	41.1	308	36.5	189	22.4
Causes of Hearing Loss With Onset After Birth								
Meningitis	2,017	100.0	446	22.1	1,014	50.3	557	27.6
Mumps	351	100.0	221	63.0	79	22.5	51	14.5
Measles	1,114	100.0	577	51.8	388	34.8	149	13.4
Otitis Media	927	100.0	643	69.4	136	14.7	148	16.0
Trauma	420	100.0	207	49.3	133	31.7	80	19.0
Fever	628	100.0	280	44.6	200	31.8	148	23.6
Other Causes	2,000	100.0	811	40.6	823	41.2	366	18.3

[1] Average hearing threshold in better ear computed at 500, 1000, 2000 cycles per second.

TABLE 8: NUMBER AND PERCENTAGE DISTRIBUTION OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY TYPE OF EDUCATIONAL PROGRAM, ACCORDING TO HEARING THRESHOLD LEVELS: UNITED STATES, 1970-71 SCHOOL YEAR.

Type of Educational Program	All Hearing Threshold Levels (ISO)[1]		Under 85dB (ISO)		85dB and Above (ISO)		Data Not Available	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All Programs	41,109	100.0	15,551	37.8	16,503	40.1	9,055	22.0
Residential School for Deaf	18,689	100.0	4,530	24.2	10,185	54.5	3,974	21.3
Day School for Deaf	2,960	100.0	939	31.7	1,442	48.7	579	19.6
Classes for Hearing Impaired	12,651	100.0	5,387	42.6	3,981	31.5	3,283	26.0
Program for Multiply Handicapped	630	100.0	302	48.0	102	16.2	226	35.9
Itinerant Program	2,685	100.0	2,193	81.7	230	8.6	262	9.8
Part-time Special Educational Services	1,698	100.0	1,042	61.4	385	22.7	271	16.0
Speech & Hearing Clinic	613	100.0	201	32.8	167	27.2	245	40.0
Other Programs	1,183	100.0	957	80.9	11	.9	215	18.2

[1]Average hearing threshold in better ear computed at 500, 1000, 2000 cycles per second.

TABLE 9: NUMBER AND PERCENTAGE DISTRIBUTION OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY HISTORY OF PARENTAL DEAFNESS BEFORE AGE SIX, ACCORDING TO HEARING THRESHOLD LEVELS: UNITED STATES, 1970-71 SCHOOL YEAR.

History of Parental Deafness Before Age Six	All Hearing Threshold Levels (ISO)[2]		Under 85dB (ISO)		85dB and Above (ISO)		Data Not Available	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total Students	41,109	100.0	15,551	37.8	16,503	40.1	9,055	22.0
Both Parents Normal Hearing	25,506	100.0	9,432	37.0	10,766	42.2	5,308	20.8
At Least One Parent With Hearing Loss[1]	2,205	100.0	720	32.7	1,053	47.8	432	19.6
Both Parents With Loss	1,044	100.0	215	20.6	579	55.5	250	23.9
Mother With Loss: Father Normal	340	100.0	170	50.0	113	33.2	57	16.8
Father With Loss: Mother Normal	287	100.0	146	50.9	96	33.4	45	15.7
One Parent With Loss: Other Parent Normal	345	100.0	102	29.6	207	60.0	36	10.4
Mother With Loss: Information on Father Not Available	150	100.0	66	44.0	47	31.3	37	24.7
Father With Loss: Information on Mother Not Available	39	100.0	21	53.8	11	28.2	7	17.9
Mother Normal: Information on Father Not Available	759	100.0	331	43.6	275	36.2	153	20.2
Father Normal: Information on Mother Not Available	124	100.0	57	46.0	48	38.7	19	15.3
Unknown or Not Reported for Both Parents	12,515	100.0	5,011	40.0	4,361	34.8	3,143	25.1

[1]Total number of parents reported as having a hearing loss prior to age six is 3,249.

[2]Average hearing threshold in better ear computed at 500, 1000, 2000 cycles per second.

TABLE 10: NUMBER AND PERCENTAGE DISTRIBUTION OF STUDENTS ENROLLED IN PARTICIPATING SPECIAL EDUCATIONAL PROGRAMS FOR THE HEARING IMPAIRED BY STATES, ACCORDING TO HEARING THRESHOLD LEVELS: UNITED STATES, 1970-71 SCHOOL YEAR.

States	All Hearing Threshold Levels (ISO)[1]		Under 85dB (ISO)		85dB and Above (ISO)		Data Not Available	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
TOTAL	41,109	100.0	15,551	37.8	16,503	40.1	9,055	22.0
ALABAMA	656	100.0	266	40.5	321	48.9	69	10.5
ALASKA	43	*	*	*	*	*	*	*
ARIZONA	388	100.0	127	32.7	208	53.6	53	13.7
ARKANSAS	19	*	*	*	*	*	*	*
CALIFORNIA	4,171	100.0	1,448	34.7	1,570	37.6	1,153	27.6
COLORADO	495	100.0	161	32.5	218	44.0	116	23.4
CONNECTICUT	761	100.0	229	30.1	254	33.4	278	36.5
DELAWARE	110	*	*	*	*	*	*	*
DISTRICT OF COLUMBIA	357	100.0	151	42.3	111	31.0	95	26.6
FLORIDA	1,097	100.0	321	29.3	354	32.3	422	38.5
GEORGIA	792	100.0	219	27.7	276	34.8	297	37.5
HAWAII	172	*	*	*	*	*	*	*
IDAHO	122	*	*	*	*	*	*	*
ILLINOIS	2,560	100.0	1,040	40.6	1,072	41.9	448	17.5
INDIANA	805	100.0	219	27.2	389	48.3	197	24.5
IOWA	526	100.0	171	32.5	199	37.8	156	29.7
KANSAS	516	100.0	204	39.5	221	42.8	91	17.6
KENTUCKY	380	100.0	109	28.7	189	49.7	82	21.6
LOUISIANA	636	100.0	168	26.4	240	37.7	228	35.8
MAINE	162	*	*	*	*	*	*	*
MARYLAND	842	100.0	309	36.7	280	33.2	253	30.0
MASSACHUSETTS	900	100.0	247	27.4	407	45.2	246	27.3
MICHIGAN	1,824	100.0	721	39.5	730	40.0	373	20.4
MINNESOTA	738	100.0	228	30.9	395	53.5	115	15.6
MISSISSIPPI	299	*	*	*	*	*	*	*
MISSOURI	1,046	100.0	374	35.8	445	42.5	227	21.7
MONTANA	124	*	*	*	*	*	*	*
NEBRASKA	247	100.0	59	23.9	92	37.2	96	38.9
NEVADA	80	*	*	*	*	*	*	*
NEW HAMPSHIRE	145	100.0	54	37.2	75	51.7	16	11.0
NEW JERSEY	1,010	100.0	206	20.4	479	47.4	325	32.2
NEW MEXICO	246	100.0	81	32.9	152	61.8	13	5.3
NEW YORK	2,7[illegible]4	100.0	862	31.8	1,447	53.3	405	14.9
NORTH CAROLINA	1,103	100.0	345	31.3	537	48.7	221	20.0
NORTH DAKOTA	126	100.0	30	23.8	52	41.3	44	34.9
OHIO	2,440	100.0	1,019	41.8	969	39.7	452	18.5
OKLAHOMA	367	100.0	147	40.1	190	51.8	30	8.2
OREGON	586	100.0	199	34.0	235	40.1	152	25.9
PENNSYLVANIA	4,931	100.0	3,243	65.8	1,039	21.0	649	13.2
RHODE ISLAND	164	*	*	*	*	*	*	*
SOUTH CAROLINA	499	100.0	149	29.9	270	54.1	80	16.0
SOUTH DAKOTA	128	*	*	*	*	*	*	*
TENNESSE	762	100.0	245	32.2	403	52.9	114	15.0
TEXAS	2,032	100.0	741	36.5	731	36.0	560	27.6
UTAH	254	*	*	*	*	*	*	*
VERMONT	129	*	*	*	*	*	*	*
VIRGINIA	673	100.0	199	29.6	322	47.8	152	22.6
WASHINGTON	938	100.0	399	42.5	288	30.7	251	26.8
WEST VIRGINIA	205	*	*	*	*	*	*	*
WISCONSIN	740	100.0	239	32.3	272	36.8	229	30.9
WYOMING	49	*	*	*	*	*	*	*

[1]Average hearing threshold in better ear computed at 500, 1000, 2000 cycles per second.

*Two or less participating programs within the state prohibits the release of information which may reveal the characteristics of particular programs.

NOTE: It should be emphasized that these data represent only those programs that participated in the Annual Survey and participation by part-time programs is very uneven in various states. For example, the 66% figure for students under 85dB in Pennsylvania, reflects the extensive participation of the itinerant programs in that state in the Annual Survey.

APPENDIX I

The Annual Survey of Hearing Impaired Children and Youth

BACKGROUND AND PURPOSE

The Annual Survey of Hearing Impaired Children and Youth began its activities in May 1968. The program is established as a permanent research organization to collect, process and disseminate data on hearing impaired individuals through college age in the United States. The need for such information has been of prime concern to educators, audiologists, legislators, psychologists and others.

The Division of Research, Bureau of Education for the Handicapped, Office of Education, Department of Health, Education, and Welfare initiated the Annual Survey and the National Institute of Education now provides the major share of its funding. Two preceding years of pilot and developmental work in a five state area determined the operational feasibility of the program. The Annual Survey is conducted by the Office of Demographic Studies of Gallaudet College.

The long range goal of the Annual Survey is to collect data on the entire hearing impaired population through college age in the United States. For operational reasons the hearing impaired population has been divided into three groups:

GROUP A: Hearing impaired individuals who are receiving special educational services related to their hearing loss

GROUP B: Individuals who have been diagnosed as being hearing impaired but who are not receiving any special educational services

GROUP C: Individuals in the general population who, in fact, are hearing impaired but their hearing loss has not been diagnosed at a given point in time.

To this point in its work, the Annual Survey has devoted its resources almost totally to collecting and disseminating information on Group A.

The primary interest of this national program is in those kinds of data that can serve to improve and expand the educational opportunities available to hearing impaired individuals. The program encourages the use of its data by administrators, researchers, and other professionals providing services to the hearing impaired, as well as by any individual or group devoted to improving the results of special education for hearing impaired people.

POLICIES

In its attempt to provide useful information to those interested in hearing impaired children and youth, the Annual Survey has the benefit of the guidance and advice of its National Advisory Committee. Among its members are hearing and deaf individuals, administrators, researchers, teachers, and specialists from other areas within the field of hearing impairment. Every attempt is made to maintain a wide diversity of interests and competencies, as well as geographic representation, among its members. On questions of a technical nature, consultants from specialized fields are utilized as particular needs arise.

While permanent and national in scope, the Annual Survey does not aim at replacing or absorbing the work of other programs at the state or local level which are devoted to the collection and dissemination of information on hearing impaired children and youth. Rather, it seeks to facilitate their work through cooperation whenever this is feasible. Nor does the Annual Survey view itself as the center for

all types of research in this field. It focuses its activities on collecting and disseminating limited kinds of information on selected topics. It seeks to make available to outside researchers the vast amount of data it possesses and any special services it is feasible to render to them.

One restriction which is observed by the Survey is that no data will be released which permits the identification of an individual student or cooperating program. Exception to this only occurs where a written release is obtained from the program supplying the data Otherwise, independent researchers using the data of the Annual Survey have access only to summary statistics or coded information.

Since the Annual Survey attempts to promote the use of its data by those whose judgments and decisions will have a direct or indirect bearing on the education of hearing impaired individuals, it recognizes a responsibility to devote a part of its resources to the evaluation of the quality of the data collected and disseminated. This is particularly important because it seeks to establish national norms on the basic characteristics of hearing impaired children and youth. Thus, in its dissemination of information, the Annual Survey makes every effort to properly qualify its data and indicate any limitation associated with it.

The Annual Survey seeks to avoid associating itself with any established position relating to controversial issues within the field of educating hearing impaired individuals. Thus, it does not interpret its own data. Rather, it seeks to facilitate the use of its data by reputable individuals or organizations that may themselves wish to draw policy implications or test research hypotheses that are related to these issues.

DATA COLLECTION

During the first year of the Survey, the 1968-69 school year, data collection activities were directed towards all schools for the deaf and a representative sample (15 percent) of all special classes. In addition, records on students who were receiving itinerant services were obtained in total from two states and in part from several states. In all 25,363 individual records were collected.

Each year the Survey has steadily increased its coverage of the population. Over 550 reporting sources with approximately 41,000 students enrolled in their programs cooperated with the Annual Survey for the 1970-71 school year. During the 1971-72 school year, data on approximately 42,000 hearing impaired students from about 640 reporting sources were obtained.

PROGRAM SERVICES AND PUBLICATION OF THE DATA

The program is accumulating a large volume of statistical data. The processing and dissemination of these data hold wide implications and potential benefits for educational, audiological, medical, psychological, legislative and other services to the hearing impaired. Towards the goal of fully utilizing the data, the program will make data available to independent investigators for research purposes, including masters' theses, doctoral dissertations, institutional level research programs, private studies, etc. Competent researchers are encouraged to propose detailed analyses of the data to further increase its usefulness.

The Annual Survey has conducted two National Academic Achievement Testing Programs, the first in the Spring of 1969 and the second in the Spring of 1971. The Annual Survey supplied testing materials and scoring services free of charge to participating programs. Data collected from these special studies have been published and continue to be analyzed. A reliability study also was conducted in conjunction with the most recent Achievement Testing Program and this evaluation study will help to determine the reliability of an achievement test designed for hearing students when used by hearing impaired students.

The Survey Office also provides each participating school or program with tabulations of the characteristics of their own students. The participating programs may obtain a set of punch cards containing the information submitted on each of their students. Further, the Annual Survey Office is available to provide consultation services to particular schools or school systems that are concerned with gathering and processing data on their students.

Participation in the Survey has led many of the programs to examine their current forms and record-keeping procedures. This led to requests that the Survey develop a uniform record form to keep student information for use in schools and classes throughout the country. Such a form was developed and used on a trial basis by a few schools during the 1970-71 school year. On the basis of this experience, the form was revised and distributed for use during the 1971-72 school year. Indications are that approximately half of the educational programs for the hearing impaired in the United States were using the form during the 1971-72 school year.

The Annual Survey also has conducted a survey of the fifty states. The state departments of either Education or Health were contacted for information

on their particular state. Among the types of information sought were: (1) description of services available to hearing impaired children and youth, (2) types of screening programs now in existence, (3) the referral system for those found to have a hearing loss, (4) the number of students receiving special services, and (5) the type of legislation relating to hearing impaired students.

The Annual Survey reports much of the data in a series of publications A listing of the publications to date appears on the inside back cover of this report.

FUTURE PLANS

During the early stages of the program, the Annual Survey devoted most of its resources to gathering basic demographic information on hearing impaired students, and to extending its coverage of these students to its current level. It is now in the process of formulating future plans, with the intention of beginning to collect information on selected topics of special interest to those in the field.

It is anticipated that the Survey will begin to collect data on the institutions themselves and the auxiliary services available to the students at the schools. Sample studies are planned in which the families of the hearing impaired students will supply information to the Survey.

Meanwhile, the Annual Survey will continue its efforts to produce an achievement test appropriate for hearing impaired students. Also being considered is the feasibility of developing measures of student performance in other areas beside academic achievement.

The initial success of the Annual Survey can be measured only in terms of the levels of participation and interest expressed by many individuals. The ultimate success will be measured not in terms of volume of data that will be collected and published, but in terms of its contributions to improving educational and other opportunities for hearing impaired children and youth.

APPENDIX II

OFFICE OF DEMOGRAPHIC STUDIES
GALLAUDET COLLEGE, WASHINGTON, D.C.

BASIC DATA FORM FOR STUDENTS AGE SIX AND OVER

(This form is to be used for children who were born in 1964 or earlier)

ACHIC 2 (71)

ANNUAL SURVEY OF HEARING IMPAIRED CHILDREN — 1970-71 School Year

CONFIDENTIAL: All information which would permit identification of any individual or institution will be held strictly confidential and will be used only by persons engaged in the survey for preparing statistical summaries. The data will not be disclosed to others for any other purpose.

Name of Reporting Source: _____

I. GENERAL INFORMATION

A. 1. Name of Student or Code Number _____ (Last) (First) (Middle) Date of Birth _____ (Mo., Day, Yr.) Sex ☐ M ☐ F

2. Residence _____ (City) (County) (State)

B. 1. Present School or Agency _____ (Name)

2. Location _____ (Number and Street) (City) (County) (State & ZIP Code)

II. EDUCATIONAL PROGRAM

A. 1. For students enrolled **fulltime** in a special class or school, check below:

☐ School for the Deaf
☐ School for Multiply Handicapped
☐ Classes for Hearing Impaired
☐ Classes for Multiply Handicapped

2. For students who do not attend a special school or class on a fulltime basis, enter type of program below:

Regular Classes _____ hours per week; **plus** itinerant services _____ hours per week.
Regular Classes _____ hours per week; **plus** other special educational services _____ hours per week.
Special Classes _____ hours per week
Other (specify type and hours per week): _____

B. 1. Type of school or agency: ☐ Public ☐ Private

2. Type of student: ☐ Residential ☐ Day

III. EDUCATIONAL HISTORY

A. Date first enrolled in **this** school: _____

B. Educational history since age six:

1. Total full years attended this school since age six: _____ (Do not include present school year)

2. Attendance at **other** schools since age six. (Do **not** include present school):

Mark all that apply. If none check here ☐

Regular Classes Only-	Regular Classes Plus Special Training-	Fulltime Classes for Hearing Impaired-	Schools for the Deaf-	Other-
_____ Years	_____ Years	_____ Years	_____ Years	_____ Years

C. Formal education prior to age six: If none check here ☐ If unknown check here ☐

1. Age started _____

2. Type (check all that apply):

☐ Preschool for Hearing
☐ Preschool for Multiply Handicapped
☐ Preschool for Hearing Impaired
☐ Parent-Child Program
☐ Speech and Hearing Clinic
☐ Other (specify) _____

IV. HISTORY OF HEARING LOSS

A. STUDENT HISTORY

1. Probable age at onset of hearing loss: ☐ At Birth _____ Years of Age

2. Age hearing loss discovered: _____ Years _____ Months

3. If onset of loss **at birth**, what was probable cause **(mark all that apply)**?

☐ Maternal Rubella ☐ Trauma to Mother ☐ Prematurity ☐ No Known Cause ☐ Data Not Available
☐ Trauma at Birth ☐ Medication During Pregnancy ☐ RH Incompatibility ☐ Complications of Pregnancy ☐ Hereditary
☐ Other (specify) _____

4. If loss acquired **after birth**, what was probable cause **(mark all that apply)**?

☐ Meningitis ☐ Mumps ☐ Measles ☐ Otitis-Media ☐ No Known Cause ☐ Data Not Available
☐ Trauma ☐ Fever
☐ Other (specify): _____

5. Birth weight, if known: _____ lbs. _____ ozs.

B. FAMILY HISTORY

1. Mother (check one): ☐ Normal hearing before age 6; ☐ Hearing loss before age 6; ☐ Data not available.

2. Father (check one): ☐ Normal hearing before age 6; ☐ Hearing loss before age 6; ☐ Data not available.

3. Siblings **(Indicate number of student's brothers and sisters in each category—If none, write "0"):**

Total number _____; Normal hearing before age 6 _____; Hearing loss before age 6 _____; ☐ Data not available

4. Does student have a twin? ☐ Yes ☐ No **(If YES, complete items 4(a), 4(b), and 4(c) below):**

(a) Sex of twin: ☐ M ☐ F
(b) Is twin enrolled in this school? ☐ Yes ☐ No
(c) Does twin have a hearing impairment? ☐ Yes ☐ No

5. Is there any family history of deafness other than parents, brothers, or sisters? ☐ Yes ☐ No If YES, who? _____

6. Are parents related other than by marriage? ☐ Yes ☐ No If YES, in what way? _____

V. AUDIOLOGICAL FINDINGS

A. ☐ Not Tested ☐ Unable To Test ☐ Tested, But Results Not Available

B. ☐ Tested **(Record Results Below):** [NOTE: If sound field examination, check here ☐. Record results in spaces provided for right ear.]

1. Standard used for testing: ☐ ISO ☐ ASA

2.

	RIGHT EAR								LEFT EAR							
Frequency	125	250	500	1000	2000	4000	6000	8000	125	250	500	1000	2000	4000	6000	8000
Air Conduction																
Bone Conduction																

C. UNAIDED SPEECH THRESHOLD

1. Test Used: ☐ SAT ☐ SRT ☐ Not Tested

2.

RIGHT EAR						LEFT EAR					
0-15dB	16-29dB	30-44dB	45-59dB	60-79dB	80dB & over	0-15dB	16-29dB	30-44dB	45-59dB	60-79dB	80dB & over

D. EXAMINER IDENTIFICATION

Name of clinic or place conducting audiological examination

_____ Date _____

Address _____
(Number and Street) (City) (State & ZIP Code)

Profession of Examiner: ☐ Audiologist ☐ Otologist ☐ Other M.D. ☐ Audiometrist ☐ Nurse ☐ Teacher

Other (specify) _____

VI. INTELLIGENCE TEST

A. ☐ Not Tested ☐ Unable To Test ☐ Tested, But Results Not Available

B. ☐ Tested (Indicate results of most recent intelligence test):

Description of Test		I.Q. Scores		Date Tested
Name	Level	Verbal Score	Nonverbal Score	Month, Yr.

VII. ADDITIONAL HANDICAPPING CONDITIONS

Check all educationally significant handicapping conditions: If none, check here ☐

☐ Epilepsy
☐ Cleft Lip
☐ Cleft Palate
☐ Severe Visual
☐ Mental Retardation
☐ Cerebral Palsy
☐ Perceptual-Motor Disorders
☐ Emotional or Behavioral Problems
☐ Heart Disorders

☐ Other (describe) _____

COMMENTS:

APPENDIX III

OFFICE OF DEMOGRAPHIC STUDIES
GALLAUDET COLLEGE, WASHINGTON, D.C.

BASIC DATA FORM FOR CHILDREN UNDER SIX

(This form is to be used for children who were born in 1965 or later.)

ACHIC 4 (71)

ANNUAL SURVEY OF HEARING IMPAIRED CHILDREN — 1970-71 School Year

CONFIDENTIAL: All information which would permit identification of any individual or institution will be held strictly confidential and will be used only by persons engaged in the survey for preparing statistical summaries. The data will not be disclosed to others for any other purpose.

Name of Reporting Source:

I. GENERAL INFORMATION

A. 1. Name of Student or Code Number _____ (Last) _____ (First) _____ (Middle) Date of Birth _____ (Mo., Day, Yr.) Sex ☐ M ☐ F

2. Residence _____ (City) _____ (County) _____ (State)

B. 1. Present School or Agency _____ (Name)

2. Location _____ (Number and Street) _____ (City) _____ (County) _____ (State & ZIP Code)

II. EDUCATIONAL PROGRAM

A. TYPE OF SCHOOL OR AGENCY

1. ☐ School for Hearing
   ☐ Classes for Hearing Impaired
   ☐ Other (specify): _____
   ☐ Residential School for Deaf
   ☐ Day School for Deaf
   ☐ School for Multiply Handicapped
   ☐ Speech and Hearing Clinic
2. Is School or Agency: ☐ Public ☐ Private
3. Type of Student: ☐ Residential ☐ Day

B. TYPE OF PROGRAM

1. Indicate number of hours per week the child is seen: _____ Hours Per Week
2. Is the child seen: ☐ Individually ☐ Group or ☐ Both
3. Total time child has been enrolled in this school or agency: _____ Years _____ Months
4. Parent Training:
   (a) Parents have completed or are enrolled in a special parent program: ☐ Yes ☐ No
   (b) Parents have completed or are participating in a correspondence course: ☐ Yes ☐ No

III. EDUCATIONAL HISTORY

A. Prior to the present program, has the child received other special educational training: ☐ Yes ☐ No

1. If YES, age started first program: _____ Years _____ Months
2. Type (include all previous programs): (a) _____ (b) _____ (c) _____
3. Total time enrolled in all previous programs: _____ Years _____ Months

IV. HISTORY OF HEARING LOSS

A. STUDENT HISTORY

1. Probable age at onset of hearing loss: ☐ At Birth _____ Years of Age
2. Age hearing loss discovered: _____ Years _____ Months
3. If onset of loss **at birth**, what was probable cause **(mark all that apply)**? ☐ No Known Cause ☐ Data Not Available
   ☐ Maternal Rubella ☐ Trauma to Mother ☐ Prematurity ☐ Complications of Pregnancy ☐ Hereditary
   ☐ Trauma at Birth ☐ Medication During Pregnancy ☐ RH Incompatibility ☐ Other (specify) _____
4. If loss acquired **after birth**, what was probable cause **(mark all that apply)**? ☐ No Known Cause ☐ Data Not Available
   ☐ Meningitis ☐ Mumps ☐ Measles ☐ Otitis-Media ☐ Trauma ☐ Fever
   ☐ Other (specify): _____
5. Birth weight, if known: _____ lbs. _____ ozs.

B. FAMILY HISTORY

1. Mother (check one): ☐ Normal hearing before age 6; ☐ Hearing loss before age 6; ☐ Data not available.
2. Father (check one): ☐ Normal hearing before age 6; ☐ Hearing loss before age 6; ☐ Data not available.
3. Siblings (**indicate number of student's brothers and sisters in each category—If none, write "0"**):
   Total number _____; Normal hearing before age 6 _____; Hearing loss before age 6 _____; ☐ Data not available
4. Does student have a twin? ☐ Yes ☐ No **(If YES, complete items 4(a), 4(b), and 4(c) below):**
   (a) Sex of twin: ☐ M ☐ F
   (b) Is twin enrolled in this school? ☐ Yes ☐ No
   (c) Does twin have a hearing impairment? ☐ Yes ☐ No
5. Is there any family history of deafness other than parents, brothers, or sisters? ☐ Yes ☐ No If YES, who? _____
6. Are parents related other than by marriage? ☐ Yes ☐ No If YES, in what way? _____

V. AUDIOLOGICAL FINDINGS

A. ☐ Not Tested ☐ Unable To Test ☐ Tested, But Results Not Available

B. ☐ Tested **(Record Results Below):** [NOTE: If sound field examination, check here ☐. Record results in spaces provided for right ear.]

1. Standard used for testing: ☐ ISO ☐ ASA

2.

	RIGHT EAR								LEFT EAR							
Frequency	125	250	500	1000	2000	4000	6000	8000	125	250	500	1000	2000	4000	6000	8000
Air Conduction																
Bone Conduction																

C. UNAIDED SPEECH THRESHOLD

1. Test Used: ☐ SAT ☐ SRT ☐ Not Tested

2.

RIGHT EAR						LEFT EAR					
0-15dB	16-29dB	30-44dB	45-59dB	60-79dB	80dB & over	0-15dB	16-29dB	30-44dB	45-59dB	60-79dB	80dB & over

D. EXAMINER IDENTIFICATION

Name of clinic or place conducting audiological examination _____ Date _____

Address _____ (Number and Street) _____ (City) _____ (State & ZIP Code)

Profession of Examiner: ☐ Audiologist ☐ Otologist ☐ Other M.D. ☐ Audiometrist ☐ Nurse ☐ Teacher

Other (specify) _____

VI. INTELLIGENCE TEST

A. ☐ Not Tested ☐ Unable To Test ☐ Tested, But Results Not Available

B. ☐ Tested (Indicate results of most recent intelligence test):

Description of Test		I.Q. Scores		Date Tested
Name	Level	Verbal Score	Nonverbal Score	Month, Yr.

VII. ADDITIONAL HANDICAPPING CONDITIONS

Check all educationally significant handicapping conditions: If none, check here ☐

☐ Epilepsy
☐ Cleft Lip
☐ Cleft Palate
☐ Severe Visual
☐ Mental Retardation
☐ Cerebral Palsy
☐ Perceptual-Motor Disorders
☐ Emotional or Behavioral Problems
☐ Heart Disorders

☐ Other (describe) _____

VIII. HEARING AID USE

A. Does Student Use a Personal Aid? ☐ Yes ☐ No
If YES, is aid: ☐ Monaural ☐ Binaural ☐ Y Cord

B. Speech Awareness Threshold With Aid is _____ dB.

C. Speech Reception Threshold With Aid is _____ dB.

COMMENTS:

APPENDIX IV

Participants in the Annual Survey of Hearing Impaired Children and Youth

ALABAMA
- Alabama Institute for the Deaf & the Blind
- Birmingham Public Schools
- Blossomwood Elementary School
- Children's Center of Montgomery, Inc.
- Etowah County Center for Aurally Handicapped
- Holt Elementary School
- Huntsville Rehabilitation Center
- Lewis-Slossfield Speech & Hearing Center
- Mobile County Public Schools
- Mobile Preschool for the Deaf, Inc.
- Rockwood Speech & Hearing Class
- Tuscaloosa County Preschool Deaf Class — University of Alabama

ALASKA
- Alaska Treatment Center for Crippled Children & Adults, Inc.
- Anchorage Borough School District

ARIZONA
- Arizona State School for the Deaf & the Blind
- Samuel Gompers Memorial Rehabilitation Center, Inc.
- Phoenix Day School for the Deaf
- Phoenix Elementary School District #1

ARKANSAS
- Arkansas Children's Handicapped Center-Hearing & Speech Clinic
- Jenkins Memorial Children's Center

CALIFORNIA
- Alameda County Hearing Impaired Program
- Alhambra City School District
- Alum Rock Union Elementary School District
- Anaheim Union High School District
- Bellflower Unified School District
- Mary E. Bennett School for the Deaf
- Butte County Schools
- California School for the Blind, Deaf-Blind Department
- California School for the Deaf, Berkeley
- California School for the Deaf, Riverside
- Cedarcreek School for the Deaf
- Centralia School District
- Ceres Unified School District
- Chula Vista City School District
- Covina Valley Unified School District
- Cutler-Orosi Unified School District
- Downey Senior High School
- East San Gabriel Valley School for Multi-Handicapped Children
- Escondido Union School District
- Fremont Unified School District
- Fresno City Unified School District
- Fresno State College Class for Multi-Handicapped Deaf
- Garden Grove Unified School District
- Goleta Union School District
- Hayward Unified School District
- Kern County Schools
- La Mesa — Spring Valley School District
- Lancaster Elementary School District
- Little Lake City School District
- Lompoc Unified School District
- Long Beach Unified School District
- Marin County Schools
- Marlton Elementary School
- Montebello Unified School District
- Monterey County Schools
- Mt. Diablo Unified School District
- Napa Valley Unified School District
- Norwalk-La Mirada Unified School District
- Oakland City Unified School District
- Orange Unified School District
- Orcutt Union School District
- Pasadena Unified School District

Placer County Special Schools
Pomona Unified School District
Richmond Unified School District
Riverside Unified School District
Sacramento City Unified School District
San Bernardino County Schools
San Diego Unified School District
San Francisco Speech & Hearing Center
San Jose City Unified School District
San Juan Unified School District
San Mateo County Classes for the Deaf
San Mateo Union High School District
Santa Ana Unified School District
Santa Clara Unified School District
Santa Cruz County Itinerant Program for Hearing Impaired
Santa Rosa City School District
Simi Valley Unified School District
Solano County Aurally Handicapped Classes
South Junior High School
Southwest School for the Deaf
Stockton Unified School District
Sunnyvale Elementary School District
Sutter County Schools
Tehama County Public Schools
Tulare County Schools
Union School District
Ventura Unified School District

COLORADO
Boulder Valley Public Schools
Children's Hospital — Audiology & Speech Pathology Department
Colorado School for the Deaf & the Blind
Colorado Hearing & Speech Center
Jefferson County Public Schools
John Evans School
Meadow Elementary School
Poudre R-1 School District
University of Northern Colorado — Special Education Laboratory School

CONNECTICUT
American School for the Deaf
Capitol Region Education Council
Easter Seal Goodwill Industries Rehabilitation Center
East Hartford Board of Education
Fairfield Public Schools
Green Acres School
Hamden-New Haven Cooperative Educational Center
Hartford Board of Education
Hazardville Memorial School
Kings Highway Elementary School
Magrath School
Mystic Oral School for the Deaf
Watertown Public Schools
West Haven Department of Special Education

DELAWARE
Margaret S. Sterck School for the Hearing Impaired

DISTRICT OF COLUMBIA
Capitol Region Model Secondary School for the Deaf
Grant School
Kendall School for the Deaf
Public Schools of the District of Columbia — Speech & Hearing Center

FLORIDA
Brevard County Schools — Exceptional Child Education
Dade County Public Schools
Easter Seal Rehabilitation Center
Escambia County Schools
Florida School for the Deaf & the Blind
Hillsborough County Public Schools
Leon County Program for Hearing Impaired Children
Multi-County Hearing Impaired Program — Lee County Board of Education
Okaloosa County Schools
Palm Beach County Schools-Exceptional Child Education
Pinellas County Schools-Exceptional Child Education
Robert McCord Oral School
Rock Lake Elementary School
Speech & Hearing Center, Inc.
Tampa Oral School for the Deaf, Inc.
Volusia County Schools

GEORGIA
Atlanta Public Schools
Atlanta Speech School, Inc.
Cobb County Board of Education — Hearing Department
The Davison School, Inc.
DeKalb County Program for Exceptional Children
Lawton B. Evans School
Georgia School for the Deaf
Houston Speech School
Savannah Speech & Hearing Center

HAWAII
Hawaii School for the Deaf & the Blind
Hawaii Department of Education

IDAHO
Idaho School for the Deaf & the Blind
Idaho State University — Speech & Hearing Center

ILLINOIS

Bell Elementary School
Black Hawk Hearing Handicapped Program
Champaign Community Schools
Chicago Vocational High School
Dixon State School
Elim Christian School for the Exceptional Child
Ericson School
Nathaniel Green School
Harrison High School
Illinois School for the Deaf
Illinois State University — Special Education Laboratory School
The Institute for Hearing & Speech
Jamieson School
Macon County Special Education District
Marquette Elementary School
Morrill Elementary School
Northern Suburban Special Education District
North-Northwest Programs for Hearing Impaired Children
Northern Illinois University-Ray Graham School
Northwestern Illinois Association
Perry School
Quincy Public Schools
Ray School
Reinberg School
St. Joseph's Hospital — Speech & Hearing Clinic
Scammon School
Shields Elementary School
South Metropolitan Association for Low Incidence Handicapped
Southwest Regional Program for Hearing Impaired
Special Education District of Lake County
Springfield Public Schools
James Ward Elementary School
West Suburban Association for the Hearing Handicapped
Williamson County Special Education District

INDIANA

Ball State University — Special Education Department
Central Avenue School
East Chicago Day Class for the Deaf
Glenwood Elementary School
Hammond Public Schools
Hearing & Speech Center of St. Joseph's County, Inc.
Indiana School for the Deaf
Indiana University Medical Center
Marion Community Schools
Muncie Community Schools
New Albany — Floyd County Public Schools
South Bend Community School Corporation
Trade Winds Rehabilitation Center, Inc.

IOWA

Black Hawk-Buchanan County Board of Education
Cedar Rapids Community Schools
Dubuque County Schools
Hope Haven School
Iowa School for the Deaf
Smouse Opportunity School
Wapello County School System
Wilson School — Oral Deaf Department

KANSAS

Hays Unified School District
Institute of Logopedics, Inc.
Kansas School for the Deaf
Lawrence Unified School District #497
Mark Twain Elementary School
Unified School District #305
Unified School District #431
University of Kansas Medical Center — Hearing & Speech Department
Wichita Public Schools

KENTUCKY

Kentucky School for the Deaf
Lexington Deaf Oral School
Louisville Independent School District
West Kentucky Easter Seal Center for Crippled Children & Adults

LOUISIANA

Acadia Parish School Board
Jefferson Parish School Board
Lafayette Parish School Board
Louisiana School for the Deaf
Speech & Hearing Center of Southwest Louisiana, Inc.
State School for the Deaf-Southern University Branch
Sunset Acres Deaf Oral Classes

MAINE

Governor Baxter State School for the Deaf
Northeast Hearing & Speech Center, Inc.

MARYLAND

William S. Baer School #301
Baltimore County Department of Special Education
Board of Education of Harford County
Gateway Preschool
Maryland School for the Deaf
Montgomery County Public Schools
Pikesville Junior High School
Prince George's County Public Schools
Special Education Center, Hagerstown

MASSACHUSETTS

Mary Altavesta School
Belmont Public Schools
Beverly School for the Deaf
Boston School for the Deaf
Children's Hospital Medical Center — Sarah Fuller Foundation
Clarke School for the Deaf
Concord Public Schools
Franklin County Public Hospital — Communications Disorders Clinic
Habilitation Center for the Preschool Hard-of-Hearing & Deaf Children, Canton
Horatio A. Kempton School
Lawrence Primary Program for the Deaf
Leominster Day Classes for the Hearing Impaired
Lowell Preschool for the Deaf
Perkins School for the Blind
Reading Day Class for Deaf-Killam School
Willie Ross School for the Deaf
Springfield Day Classes for the Deaf
Thayer-Lindsley Nursery
Waltham Public Schools
Worcester Day Classes for the Deaf

MICHIGAN

Allen Park Public Schools
Battle Creek Public Schools
Brighton Public Schools
Constantine Day School for Deaf & Hard of Hearing
Delta-Schoolcraft Intermediate School District
Detroit Day School for Deaf
Douglas Elementary School
Durant-Tuuri-Mott School
Handley School
Holland Public Schools
Ida Public Schools
Jackson Public Schools
Kalamazoo Public Schools
Lakeview Public Schools
Lansing School District
Lapeer State Home & Training School
Lutheran School for the Deaf
Michigan School for the Blind
Michigan School for the Deaf
Michigan State University Speech & Hearing Clinic
Muskegon Public Schools
Negaunee Public Schools
Oakland County Schools
Port Huron Area School District
Redford Union Schools
Shawnee Park Schools
Tecumseh Public Schools
Traverse City Public Schools
Tri-County Preschool
University of Michigan Speech Clinic
Utica Community Schools
Warren Consolidated Schools
Wyoming Preschool for the Physically Handicapped

MINNESOTA

Anoka Hennepin School District #11
Austin Public Schools
Duluth Public Schools
Lutheran High School
Minneapolis Public Schools
Minnesota School for the Deaf
St. Paul Area Program for Impaired Hearing
St. Paul Area Technical Vocational Institute

MISSISSIPPI

Mississippi School for the Deaf
Tupelo Regional Rehabilitation Center

MISSOURI

Central Institute for the Deaf
Delaware Elementary School
Gallaudet School for the Deaf
Greater Kansas City Hearing & Speech Center
Missouri School for the Deaf
Neosho School District R #5
St. Louis County Special School District for the Handicapped
St. Louis University Speech & Hearing Clinic
School District of Kansas City
School District of St. Joseph

MONTANA

Montana State School for the Deaf & the Blind
University of Montana Speech & Hearing Clinic

NEBRASKA

Nebraska School for the Deaf
Omaha Hearing School for Children, Inc.
Omaha Public Schools
Prescott Elementary School

NEVADA

Ruby Thomas Elementary School
Washoe County School District

NEW HAMPSHIRE

Crotched Mountain School for the Deaf
Easter Seal Rehabilitation Center of Greater Manchester
Portsmouth Rehabilitation Center

NEW JERSEY

American Institute for Mental Studies
Avon School
Bruce Street School
Cumberland County Public Schools
Douglas College Hearing & Speech Center
Hackensack Program for the Deaf
Helmbold Education Center
Hunterdon Medical Center — Preschool for Auditorally Impaired
Marie H. Katzenbach School for the Deaf
The Midland School
Millburn Avenue School
Neptune Township Schools
Newark State College — Educational Resource Center
Speech & Hearing Center, Burlington County Memorial Hospital
Summit Speech School
Woodbridge Township Public Schools

NEW YORK

Albany Medical Center Hospital
Board of Cooperative Educational Services, Erie County I
Board of Cooperative Educational Services, Nassau County I
Board of Cooperative Educational Services, Rensselaer County
Board of Cooperative Educational Services, Suffolk County II
Board of Cooperative Educational Services, Suffolk County III
Board of Cooperative Educational Services of Washington, Warren, & Hamilton Counties
Buffalo Public Schools
Caritas Day School for Deaf
Children's Hospital & Rehabilitation Center
Demonstration Home Program — Rochester School for the Deaf
Junior High School 47 — School for the Deaf
Meadowbrook Hospital Speech & Hearing Clinic
Mill Neck Manor Lutheran School for the Deaf
New York Institute for the Education of the Blind
New York School for the Deaf, White Plains
New York State School for the Deaf, Rome
Queens College Speech & Hearing Center
Rochester School for the Deaf
St. Francis de Sales School for the Deaf
St. Joseph's School for the Deaf
St. Mary's School for the Deaf
School for Language & Hearing Impaired Children — Public School 158
Union-Endicott Central School District

NORTH CAROLINA

Central North Carolina School for the Deaf
Charlotte-Mecklenburg Schools
Duke University Medical Center-Acoustic Nursery
Duke University Medical Center-Training Center for Hearing Impaired Children
Eastern North Carolina School for the Deaf
North Carolina School for the Deaf
Path School, Inc.
Wake County Schools

NORTH DAKOTA

Longfellow School
Minot State College Speech & Hearing Clinic
North Dakota School for the Deaf
University of North Dakota Speech & Hearing Clinic

OHIO

Akron Public Schools
Alexander Graham Bell School for Deaf, Cleveland
Alexander Graham Bell School for Deaf, Columbus
Betty Jane Memorial Rehabilitation Center-Oral School
Canton City Public Schools
Clark County Hearing & Speech Center
Elyria City Schools
Hamilton County School Districts-University of Cincinnati
Howard School for the Hearing Impaired
L.B. Kean Elementary School
Kennedy School for the Deaf
Kent Public Schools
Litchfield Rehabilitation Center-Preschool Deaf Nursery
McKinley Elementary School
Mansfield City Schools
Millridge Center for Hearing Impaired Children
Ohio School for the Deaf
St. Rita School for the Deaf
Springfield City Schools
Toledo Public Schools
Trumbull County Hearing Society
Warren City Schools
Youngstown Public Schools
Zanesville Classes for Deaf

OKLAHOMA

Enid Community Speech & Hearing Center
Kerr Junior High School
Oklahoma City Public Schools
Oklahoma School for the Deaf
Oklahoma University Medical Center-School for the Deaf
Shawnee Public Schools

OREGON

Eugene Hearing & Speech Center
Oregon State School for the Deaf
Portland Center for Hearing & Speech, Inc.
Portland Public Schools
Tucker-Maxon Oral School

PENNSYLVANIA

DePaul Institute
Ebensburg State School & Hospital
Elwyn Institute
Erie City School District
Home of the Merciful Saviour for Crippled Children
Willis and Elizabeth Martin School
Pennhurst State School & Hospital
Pennsylvania School for the Deaf
Pennsylvania State Oral School for the Deaf
The Pittsburgh Hearing & Speech Society, Inc.
Western Pennsylvania School for the Deaf
Programs for Speech & Hearing Handicapped:
Adams County Schools
Allegheny County Schools
Armstrong County Schools
Beaver County Schools
Bedford County Schools
Berks County Schools
Blair County Schools
Bradford County Schools
Bucks County Schools
Cambria County Schools
Cameron County Schools
Carbon County Schools
Centre County Schools
Chester County Schools
Clarion County Schools
Clinton County Schools
Crawford County Schools
Cumberland County Schools
Dauphin County Schools
Delaware County Schools
Elk County Schools
Erie County Schools
Fayette County Schools
Franklin County Schools
Fulton County Schools
Huntingdon County Schools
Indiana County Schools
Lancaster County Schools
Lawrence County Schools
Lebanon County Schools
Luzerne County Schools
Lycoming County Schools
McKean County Schools
Mercer County Schools
Mifflin County Schools
Monroe County Schools
Montgomery County Schools
Northampton County Schools
Northumberland County Schools
Pike County Schools
Potter County Schools
Schuylkill County Schools
Snyder County Schools
Somerset County Schools
Sullivan County Schools
Tioga County Schools
Venango County Schools
Warren County Schools
Washington County Schools
Westmoreland County Schools
York County Schools

RHODE ISLAND

Rhode Island School for the Deaf
Rhode Island Hospital

SOUTH CAROLINA

Brennen Hearing Handicapped School
Darlington Area Schools
Estes Elementary School
Florence County School District #3
Hearing & Speech Center, Columbia
Keowee Schools
Charles Lea Center — Speech & Hearing Clinic
Memminger Elementary School
Pee Dee Speech & Hearing Center
South Carolina School for the Deaf & the Blind
United Speech & Hearing Services — Regional Program for the Hearing Impaired

SOUTH DAKOTA

South Dakota School for the Deaf

TENNESSEE

Arlington State Hospital & School
Clover Bottom Hospital & School
East Tennessee State University — Speech & Hearing Clinic
Green Valley Hospital & School
Hamilton County Speech & Hearing Center
Memphis Parents School for Deaf & Aphasic
Memphis Speech & Hearing Center
Metropolitan Nashville Schools – Hearing Impaired Program
Sunnyside Elementary School
Tennessee School for the Deaf
University of Tennessee-Preschool Program for Hearing Impaired
Bill Wilkerson Hearing & Speech Center

TEXAS

Abilene Independent School District
Austin Independent School District
Bexar County School for the Deaf
Bi-County Day School for the Deaf, Waco
Callier Hearing & Speech Center
Cameron-Hidalgo Bi-County Day School for the Deaf
El Paso County-Wide Day School for the Deaf & Hard of Hearing
Farias Special Education School
Grayson County Society for Crippled Children & Adults, Inc.
Harlandale Independent School District
Harris County-Wide Day School for the Deaf
Houston School for Deaf Children
Houston Speech & Hearing Center
Lubbock Independent School District
Midland Independent School District
Multi-County School for the Deaf, Beaumont
Nueces-San Patricio Bi-County School for the Deaf
Pasadena Independent School District
Port Arthur Independent School District
Sunshine Cottage School for Deaf Children
Tarrant County Day School for Deaf
Texarkana Independent School District
Texas Christian University Speech & Hearing Clinic
Texas School for the Deaf
Wichita Falls Independent School District

UTAH

Utah Schools for the Deaf & the Blind
Utah State University-Edith Bowen Laboratory School

VERMONT

Austine School for the Deaf

VIRGINIA

Arlington County Public Schools
Bristol Memorial Hospital Speech & Hearing Center
Charlottesville Public Schools
Chesterfield County Public Schools
Diagnostic, Adjustive & Corrective Center for Learning
Diagnostic Special Education School of Tidewater Rehabilitation Institute
Oral School, Richmond
Virginia School for the Deaf & the Blind
Virginia State School for the Deaf at Hampton

WASHINGTON

Bellevue Public Schools
Bremerton School District
Edmonds School District #15
Edna E. Davis School
Kent Public Schools
Northshore School District #417
Seattle Community College — Classes for the Deaf
Seattle Public Schools
Shoreline School District #412
University of Washington — Experimental Education Unit
Washington State School for the Blind
Washington State School for the Deaf
Washington State University Speech & Hearing Clinic
Yakima School District #7

WEST VIRGINIA

Kanawha Hearing & Speech Center — Charleston Memorial Hospital
West Virginia Schools for the Deaf & the Blind

WISCONSIN

Bartlett School
Cooper Day School for Deaf
Green Bay School for the Deaf
La Crosse Classes for the Hearing Impaired
Madison Public School System
Milwaukee Hearing Society, Inc.
Oshkosh Area Public Schools
Pleasant Hill School
St. John's School for the Deaf
E. H. Wadewitz School
Wausau Day School for the Deaf
Sheboygan Public Schools
Wisconsin School for the Deaf

WYOMING

Wyoming School for the Deaf

REPORTS FROM THE ANNUAL SURVEY OF HEARING IMPAIRED CHILDREN AND YOUTH

SERIES D

No. 1 Academic Achievement Test Performance of Hearing Impaired Students — United States: Spring 1969

No. 2 Item Analysis of Academic Achievement Tests Hearing Impaired Students — United States: Spring 1969

No. 3 Additional Handicapping Conditions, Age at Onset of Hearing Loss, and Other Characteristics of Hearing Impaired Students — United States: 1968-69

No. 4 Type and Size of Educational Programs Attended By Hearing Impaired Students — United States: 1968-69

No. 5 Summary of Selected Characteristics of Hearing Impaired Students — United States: 1969-70

No. 6 Audiological Examinations of Hearing Impaired Students — United States: 1969-70

No. 7 Characteristics of Hearing Impaired Students Under Six Years of Age — United States: 1969-70

No. 8 Item Analysis of an Achievement Testing Program for Hearing Impaired Students — United States: Spring 1971

No. 9 Academic Achievement Test Results of a National Testing Program for Hearing Impaired Students — United States: Spring 1971

No. 10 Characteristics of Hearing Impaired Students by Hearing Status — United States: 1970-71

SPECIAL REPORTS FROM THE OFFICE OF DEMOGRAPHIC STUDIES, GALLAUDET COLLEGE

SERIES C

No. 1 National Survey of State Identification Audiometry Programs and Special Educational Services for Hearing Impaired Children and Youth — United States: 1972